

Appln. No. 10/691,314
Docket No. 138161/GEM-0080

REMARKS / ARGUMENTS

Status of Claims

Claims 1-18 are pending in the application and stand rejected.

Applicant has provided clarifying remarks regarding Claims 1-18 and has added new Claims 19-20, leaving Claims 1-20 for consideration upon entry of the present Amendment.

Applicant respectfully submits that the rejections under 35 U.S.C. §102(e) and 35 U.S.C. §103(a) have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

Rejections Under 35 U.S.C. §102(e)

Claims 1, 2, 6-8, 11, 14, 15 and 18 stand rejected under 35 U.S.C. §102(e) as being anticipated by Wu (U.S. Patent No. 7,047,060, hereinafter Wu).

Applicant traverses this rejection for the following reasons.

Applicant respectfully submits that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, *in a single prior art reference.*" *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the *** claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, the single source must disclose all of the claimed elements "arranged as in the claim." *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

Independent Claims 1, 11 and 15 recite, inter alia:

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“...determining for a period of time *the time between each trigger point and the local maxima or minima associated therewith*;

in response to the trigger point occurring at the associated local maxima or minima, calculating a zero time differential for a corrected trigger for gating; and

in response to the trigger point not occurring at the associated local maxima or minima, calculating a time differential for the corrected trigger for gating based on the time difference between the trigger point and the associated local maxima or minima.”

Dependent claims inherit all of the limitations of the respective parent claim.

In alleging anticipation, the Examiner alleges that Wu discloses each and every element of the claimed invention arranged as claimed, but does not state with specificity where Wu discloses “determining for a period of time *the time between each trigger point and the local maxima or minima associated therewith*”, nor “*in response to the trigger point occurring at the associated local maxima or minima, calculating a zero time differential* for a corrected trigger for gating”, nor “*in response to the trigger point not occurring at the associated local maxima or minima, calculating a time differential* for the corrected trigger for gating based on the time difference between the trigger point and the associated local maxima or minima.”

For example, the Examiner remarks that Wu discloses “...with time delay determination for *a period of time between trigger point and the local maxima and minima associated...*”. Instant Office Action, page 2 (emphasis added).

Applicant respectfully disagrees with the Examiner.

At column 7, lines 3-5, Applicant finds Wu to disclose “...*a trigger event 102*, such as an occurrence of the R pulse. Detection 100 of *the trigger event 102 indicates the start of a cardiac cycle interval 104*.” At column 7, lines 9-11, Applicant finds Wu to disclose “Once the start of the *cardiac interval 104 is identified, the start of the data acquisition sequence is delayed by a selected gating delay 106*.”

Here, Applicant finds Wu to disclose a trigger event 102 that indicates the start of a cardiac cycle interval 104, which when identified, enables the start of the data acquisition sequence to be delayed by a selected gating delay 106.

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Not only does Applicant find Wu to be absent any disclosure of *determining the time between each trigger point and the local maxima or minima*, but Applicant also finds Wu to be absent any analysis that even compares a trigger point to an associated local maxima or minima. At col. 7, line 3, Applicant finds Wu to correlate a trigger event 102 to the occurrence of an R pulse, but submits that this correlation is substantially different from the claimed determining for a period of time the time between each trigger point and the local maxima or minima associated therewith.

As another example, the Examiner remarks that Wu discloses "...in response to trigger point, *determining time differential* for adjusted trigger due to variation in heart beat...". Instant Office Action, page 2 (emphasis added).

Applicant respectfully disagrees that the Examiner's paraphrasing is an accurate depiction of the claimed invention, which claims "in response to the trigger point occurring at the associated local maxima or minima, *calculating a zero time differential* for a corrected trigger for gating".

Nowhere does the Examiner show where Wu discloses the calculating a zero time differential in response to the trigger point occurring at the associated local maxima or minima, and Applicant submits that Wu is absent such disclosure.

As a further example, the claimed invention is subject to two conditional limitations, calculating for a corrected trigger in response to the trigger point occurring at the associated local maxima or minima, and calculating for a corrected trigger in response to the trigger point not occurring at the associated local maxima or minima. Nowhere does the Examiner show where Wu discloses these two conditional limitations, and Applicant submits that Wu is absent such disclosure.

In view of the foregoing, Applicant submits that Wu does not disclose each and every element of the claimed invention arranged as claimed, and absent anticipatory disclosure in Wu of each and every element of the claimed invention arranged as claimed, Wu cannot be anticipatory. Accordingly, Applicant respectfully submits that the Examiner's rejection under 35 U.S.C. §102(e) has been traversed, and requests that the Examiner reconsider and withdraw this rejection.

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Rejections Under 35 U.S.C. §103(a)

Claims 9 and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wu.

Claims 3-5, 12, 13, 16 and 17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wu as applied to claims 1, 11 and 15 above, and further in view of Citron et al (U.S. Patent No. 4,364,397, hereinafter Citron).

Applicant traverses these rejections for the following reasons.

Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention in such a manner as to perform as the claimed invention performs. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

In view of Claims 3-5, 9, 10, 12, 13, 16 and 17 being dependent claims, in view of Citron not being applied against any independent claim, and in view of Applicant's remarks set forth above regarding the deficiencies of Wu in anticipating the claimed invention of the independent claims, Applicant submits that not only is Wu deficient in teaching each and every element of the claimed invention arranged so as to perform as the claimed invention performs, but that Citron is also deficient in curing the deficiencies of Wu.

Dependent claims inherit all of the limitations of the respective parent claim and any intervening claim.

In view of the foregoing, Applicant submits that the References fail to teach or suggest each and every element of the claimed invention and are therefore wholly inadequate in their teaching of the claimed invention as a whole, fail to motivate one skilled in the art to do what the patent Applicant has done, fail to recognize a problem recognized and solved only by the present invention (calculating for a corrected gating

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trigger for a patient having an irregular heartbeat), fail to offer any reasonable expectation of success in combining the References to perform as the claimed invention performs, and discloses a substantially different invention from the claimed invention, and therefore cannot properly be used to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be traversed.

In light of the forgoing, Applicant respectfully submits that the Examiner's rejections under 35 U.S.C. §102(e) and 35 U.S.C. §103(a) have been traversed, and respectfully requests that the Examiner reconsider and withdraw these rejections.

New Claims 19-20

Applicant has added new Claims 19-20 to capture originally disclosed but previously unclaimed subject matter. No new matter has been added as antecedent support may be found in the application as originally filed, such as at Paragraph [0019] ("EKG monitor trigger points 315 are not substantially synchronized with a particular point on the waveform of gated-EKG signal 300"), and at Paragraph [0020] ("the term substantially synchronized refers to the degree of synchronization being within defined statistical limits"), for example.

In comparing Wu with new Claims 19-20, Applicant submits that Wu discloses and teaches a trigger 102 that can be defined by any convenient *recurring reference point* within the cardiac cycle (col. 7, lines 6-9), which is substantially different from the trigger points *not being substantially synchronized* with a particular point on a waveform of the gated electrocardiogram signal.

In view of the foregoing, Applicant submits that Claims 19-20 are allowable, and respectfully requests notice thereof.

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The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 07-0845.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above-identified Deposit Account.

Respectfully submitted,
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